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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,861	02/22/2002	Robert Otillar	06730.0016.CPUS00	2418

28694 7590 06/28/2004

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EXAMINER	
LUDLOW, JAN M	

ART UNIT	PAPER NUMBER
1743	

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/683,861	OTILLAR ET AL.	
	Examiner	Art Unit	
	Jan M. Ludlow	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) *1-38 and 42-45* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *39-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2/2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Applicant's election with traverse of group II, claims 39-41 in the reply filed on April 15, 2004 is acknowledged. The traversal is on the ground(s) that there is no burden in searching the plural concepts, three of which are classified in the same subclass, and that the examiner has not shown why Group III is classified differently form Groups I, II, IV. This is not found persuasive because the burden results from the requirement of using different search terms in electronic searching, and the concomitant analysis of the resulting multiplicity of references. Group III is classified differently because it is directed to an analytical method, whereas groups I, II, IV are directed to apparatus. The pertinent portions of class 436 contain methods, whereas the pertinent portions of class 422 contain apparatus.

The requirement is still deemed proper and is therefore made FINAL.

2. The disclosure is objected to because of the following informalities: In the citation of the provisional application, the wrong serial number and filing date are given—60/228015 filed August 24, 2000 should be recited.

Appropriate correction is required.

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of

any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. Claims 39-41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

5. Instant claim 39 is directed to attracting a sample particle to a crater *commensurate in shape and size with a portion of said sample particle* so as to hold the sample particle therein and then *detecting the number of particles* attracted to the location. This embodiment is not disclosed or adequately described in the application as originally filed. In the embodiments in which a sample particle is commensurate is size with the crater (Figures 8+, page 15 of the specification), properties of the particles are detected by the sensor(s), not the number of particles. In the embodiments in which numbers of particles are detected, the particles are smaller than the craters so that more than one can fit in the crater (page 17).

6. The amendment filed October 27, 2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Note that the limitation to the particle and crater being commensurate is size was added to the

method of detection of particle numbers of claim 39 in the amendment filed October 27, 2003 and constitutes new matter as explained above.

Applicant is required to cancel the new matter in the reply to this Office Action.

7. Claims 39-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 39, it is unclear how the locations and craters are related. It is unclear whether "a sample particle" of line 7 is the same or in addition to the plurality of sample particles of claim 10, and how they relate to those of lines 12 and 14 (unclear antecedence). It is unclear how the step of detecting is related to the sensing element. In claim 40, it is unclear whether "a crater" is the same or in addition to the crater recited in claim 39 (unclear antecedence). In claim 41, it is unclear how plural particles can enter the crater when the crater and particles are commensurate in size.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 39-41 are rejected under 35 U.S.C. 103(a) as being obvious over Burdon et al.

5. For purposes of examination, the phrase "commensurate in shape and size with a portion of the sample particle so as to hold said sample particle in place therein" has been interpreted to mean that all or part of the bead fits in the cavity.

6. Burdon teaches a method of moving fluid through a microfluidic device including a cavity 204 surrounded by coil 202 for detecting inductance of magnetic particles entering the cavity (col. 19, line 46 – col. 20, line 30, esp. line 26, Figure 4). Individually actuated electromagnets may be used to pump fluid (col. 26, line 50-col. 28, line 50).

7. Burdon fails to explicitly teach the detection and electromagnets used in proximity to the same cavity.

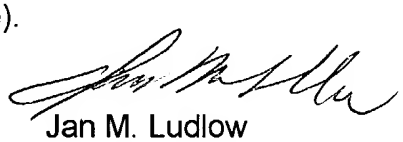
8. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the electromagnets to move fluids into a cavity and

inductance to determine whether or not the fluid has filled the cavity in order to provide the two functions taught by Burdon for the purposes taught. Note that the inductance signal is indicative of the number of particles as taught by Burdon.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jan M. Ludlow whose telephone number is (571) 272-1260. The examiner can normally be reached on Monday-Thursday, 11:30 am - 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jan M. Ludlow
Primary Examiner
Art Unit 1743

Jml
June 24, 2004